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Кафедра «Автоматизированные системы обработки информации и управления»



**Отчет по лабораторной работе № 3**

**Курс «Разработка интернет-приложений»**

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**baseclient.py**

class BaseClient:

BASE\_URL = None

method = None

http\_method = None

def get\_params(self):

pass

def get\_json(self):

pass

def get\_headers(self):

pass

def generate\_url(self, method):

return '{0}{1}'.format(self.BASE\_URL, method)

def \_get\_data(self, method, http\_method):

return self.response\_handler(response)

def response\_handler(self, response):

return response

def execute(self):

return self.\_get\_data(

self.method,

http\_method=self.http\_method

)

**friends.py**

from baseclient import BaseClient

import requests

import json

from datetime import datetime

class Friends(BaseClient):

BASE\_URL = 'https://api.vk.com/method/friends.get'

http\_method = 'GET'

def \_\_init\_\_(self, uid):

self.uid = uid

def get\_params(self):

return 'user\_id=' + str(self.uid) + '&fields=bdate'

def response\_handler(self, response): #обработчик ответа

try:

uobj = json.loads(response.text)

friends = uobj.get('response')

ages = []

for friend in friends:

bdate = friend.get('bdate')

if bdate is None or bdate.count('.') < 2:

continue

bdate = datetime.strptime(bdate, "%d.%m.%Y")

ndate = datetime.now()

ages.append(int((ndate - bdate).days) // 365.2425)

uniqages = list(set(ages)) #устранение дубликатов в массиве возрастов

return sorted([(x, ages.count(x)) for x in uniqages], key=lambda x: x[0])

except:

raise Exception("Couldn't handle response for friends of uid {}".format(self.uid))

def \_get\_data(self, method, http\_method):

response = requests.get(self.BASE\_URL + '?' + self.get\_params())

return self.response\_handler(response)

**id\_from\_username.py**

from baseclient import BaseClient

import requests #библиотека запросы

import json

class IdFromUsername(BaseClient):

BASE\_URL = 'https://api.vk.com/method/users.get'

http\_method = 'GET'

def \_\_init\_\_(self, name):

self.name = name

def get\_params(self):

return 'user\_ids=' + self.name

def response\_handler(self, response): #обработчик ответа

try:

uobj = json.loads(response.text)

return uobj.get('response')[0].get('uid')

except:

raise Exception("Couldn't handle response for username {}".format(self.name))

def \_get\_data(self, method, http\_method):

response = requests.get(self.BASE\_URL + '?' + self.get\_params())

return self.response\_handler(response)

**vk.py**

from id\_from\_username import IdFromUsername

from friends import Friends

uclient = IdFromUsername('1')

uid = uclient.execute()

friends\_client = Friends(uid)

friends = friends\_client.execute()

for (age, count) in friends:

print('{} {}'.format(int(age), '#' \* count))

**Скриншот результата:**

